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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,774	03/14/2005	Gerhard Engelmann	AT 020060	1799
24737 7590 02/06/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
TORRENTE, RICHARD T				
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
02/06/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/527,774

Applicant(s)

ENGELMANN, GERHARD

Examiner

RICHARD TORRENTE

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figure(s) 1-3 are objected to as depicting a block diagram without "readily identifiable" descriptors of each block, as required by 37 CFR 1.84(n). Rule 84(n) requires "labeled representations" of graphical symbols, such as blocks; and any that are "not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable." In the case of Figure(s) 1-3, the blocks are not readily identifiable per se and therefore require the insertion of text that identifies the function of those blocks. That is, each vacant block should be provided with a corresponding label identifying its function or purpose.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because legal phraseology "means" are used. Correction is required. See MPEP § 608.01(b).
4. title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Video Coding Method Based on Segments Complexity for Bit Rate Control.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim(s) 8 is/are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Claim 8 recites the limitation "the segment-overall-bit-quantity" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO interim guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material". In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim(s) 14 and 15 is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 14 and 15 defines a program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory on most cases since use of technology permits the function of the descriptive material to be realized" - Guidelines Annex IV). That is, the scope of the presently claimed a program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Holmes et al. (WO 01/19082) (IDS).

Regarding claim 1, Holmes discloses a coding method of generating a compressed data stream (see abstract; see 54 in fig. 3) with variable bit rate (see 64 in fig 4) from digital audio and/or video signals (DIG-AV) (see 26 in fig. 1), wherein the overall bit quantity/rate (see 62 in fig. 4) of the data stream does not exceed a prescribed limit (see dash line limit in 62 of fig. 4), characterized in that: the audio and/or video signals (P-AV) are put into intermediate storage in a temporary buffer (see 28 in fig. 1), the audio and/or video signals are analyzed in respect of the complexity of the signal waveform in order to obtain complexity information (see 56 in fig. 3), the audio and/or video signals put into intermediate storage in the temporary buffer are divided into individual segments (see 54s in fig. 3), the audio and/or video signals (P-AV) are read, segment by segment, from the temporary buffer (see 54 in fig. 3) and, with the complexity information (C-INF) assigned to them, are subjected to a compression method for signal compression (see 56 in fig. 3) which ultimately delivers a data stream (CAV) with a variable bit rate (see 64 in fig. 4), wherein the bit rate is distributed within the segment as a function of the complexity information (see 54 versus 64 in fig. 3 and 4 respectively) and of a segment-overall-bit-quantity (see dash line in 62 of fig. 4) provided for the segment in question, and the data stream is transmitted via a data transmission device (12 in fig. 1).

Regarding claims 2 and 10, Holmes further discloses characterized in that the temporary buffer is organized as a ring buffer (see 28 in fig. 1 and 54s in fig. 3).

Regarding claims 3 and 11, Holmes further discloses in that the temporary buffer comprises at least two independent memory areas (see separately stored sequence of 54s in fig. 3) or memory units, to which or from which audio and/or video signals (P-AV) can be written or read alternately, segment by segment (see fig. 3).

Regarding claim 4, Holmes further discloses characterized in that the audio and/or video signals stored in temporary buffer are divided into segments of equal length (see page 9, lines 1-2).

Regarding claims 5 and 12, Holmes further discloses characterized in that the lengths of the segments of the audio and/or video information stored in temporary buffer can be altered adaptively as a function of the signal complexity (see varying segments 54 in fig. 3).

Regarding claims 6 and 13, Holmes further discloses characterized in that the audio and/or video signals are subjected to precompression before they are stored in temporary buffer (see page 9, lines 21-24).

Regarding claim 7, Holmes further discloses characterized in that, during the precompression, the audio and/or video signals are analyzed in respect of the complexity of their signal waveforms (see page 9, lines 25-26), and the complexity information (C-INF) thereby obtained is stored, together with the audio and/or video

signals (P-AV) in temporary buffer for further use in the subsequent compression procedure (see fig. 3).

Regarding claim 8, Holmes further discloses characterized in that, in the event that the segment-overall-bit-quantity provided for a segment is not fully used up owing to the low complexity of the signals, the remainder is assigned to the subsequent segments (see correlation of fig. 3 to fig. 4 in segmentation).

Regarding claim 9, the claim(s) recite analogous limitations to claim 1, and is/are therefore rejected on the same premise.

Regarding claims 14, 15 and 16, the claim(s) recite analogous limitations to claim 1, and is/are therefore rejected on the same premise.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD TORRENTE whose telephone number is (571) 270-3702. The examiner can normally be reached on M-F: 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Young Lee/
Primary Examiner, Art Unit 2621

RT
/Richard Torrente/
Examiner, Art Unit 2621